

AMENDMENTS TO THE CLAIMS

The following Listing of Claims replaces all prior listings, and versions, of claims in the subject patent application.

1-31. (canceled)

32. (previously presented) A process for attaching a label jacket to objects, such as bottles or similar items, comprising:

seizing a label jacket by a separating jaw unit by its forward margin for pulling in an axial direction over an object,

holding the object with a holding device, prior to the pull-over application by the area of its mantle surface, by positive or friction lock,

initiating the pull-over process,

temporarily releasing the holding device on the mantle surface as soon as the separating jaw unit at least partially surrounds the object over its mantle surface,

seizing the latter object by the area of its mantle surface, which is now covered with the label, at the latest when the desired adhesion height of the label jacket on the object has been reached, and thereby affixing the label in a manner so it cannot slip,

pulling off the separating jaw unit,

and causing the hold of the object to occur at two places of its mantle surface with separation intervals in the axial direction, and alternately controlling the two axially displaced holding devices to rise, during the pull-over application of the label jacket, in such a manner that the object is at all times subject to or guided by at least one holding device.

33. (previously presented) A process for attaching a label jacket to objects, such as bottles or similar items, comprising:

seizing a label jacket by a separating jaw unit by its forward margin for pulling in an axial direction over an object,

holding the object with a holding device, prior to the pull-over application by the area of its mantle surface, by positive or friction lock,

initiating the pull-over process,

temporarily releasing the holding device on the mantle surface as soon as the separating jaw unit at least partially surrounds the object over its mantle surface,

seizing the latter object by the area of its mantle surface, which is now covered with the label, at the latest when the desired adhesion height of the label jacket on the object has been reached, and thereby affixing the label in a manner so it cannot slip,

pulling off the separating jaw unit,

wherein the label jacket consists of a film hose material which is shrinkable when exposed to heat, which has an internal diameter which is equal to or larger than the external diameter of the object, and the further step of, after the adhesion height has been reached, at least partially shrink wrapping the film hose material on the object, before the holding device of the label jacket and of the object is released.

34. (previously presented) Device for the attachment of a label jacket (E) to objects (F), such as bottles or similar items, comprising in combination:

at least one spreading jaw unit (50) for seizing the label jacket at its forward margin and axial pull-over application of the label jacket by means of the spreading jaw unit onto an object,

at least one controllable holding device (20) for seizing the object (F), with positive or friction lock, in the area of its mantle surface,

wherein said spreading jaw unit (50) is constructed in the form of a nipper having two internal jaws (51a, 51b), which can be swiveled horizontally in opposite directions in a controlled manner and an application surface (53) for the forward margin of a label jacket (E), and two counter arms (52a, 52b), which are associated with said internal jaws and which can be swiveled in opposite directions either towards each other or towards said internal jaws, and where said internal jaws can be brought in contact with friction lock with the internal side, and said counter arms with the external side, of a label jacket.

35. (new) Process according to Claim 32, and causing the hold on the mantle surface of the object to occur at a certain height position, first with positive or friction lock, briefly releasing the holding device as soon as the forward margin of the label jacket approaches this height position with simultaneous axial support of the object, and holding the object, after the passage of the height position, in such a manner that the label jacket can then continue to be pulled over axially with respect to the object until the adhesion height is reached.

36. (new) Process according to Claim 32, and controlling the holding device of the object, during the axial pull-over application of the label jacket, as a function of the operating movement of the spreading jaw unit.

37. (new) Process according to Claim 32, wherein the label jacket comprises a stretchable film hose material with smaller internal diameter than the external diameter of the object, and the further steps of, before the pulling over, elastically extending the stretchable film hose material at least at its forward margin advancing in the axial direction, by the spreading jaw to a value in excess of the external diameter, and releasing the elastic extension of the stretchable film hose material after the adhesion height has been reached.

38. (new) Process according to Claim 32, wherein the label jacket comprises a film hose material which is shrinkable when exposed to heat, which has an internal diameter which is equal to or larger than the external diameter of the object, and the further step of, after the adhesion height has been reached, at least partially shrink wrapping the film hose material on the object, before the holding device of the label jacket and of the object is released.

39. (new) Process according to Claim 38, wherein, after releasing the holding device, a complete shrink wrapping occurs.

40. (new) Process according to claim 32, and continuously transporting the object, at least during the pull-over application of the label jacket.

41. (new) Process according to claim 32, wherein the object is continuously transported in a circular path.

42. (new) Process according to Claim 33, and causing the hold on the mantle surface of the object to occur at a certain height position, first with positive or friction lock, briefly releasing the holding device as soon as the forward margin of the label jacket approaches this height position with simultaneous axial support of the object, and holding the object, after the passage of the height position, in such a manner that the label jacket can then continue to be pulled over axially with respect to the object until the adhesion height is reached.

43. (new) Process according to Claim 33, and causing the hold of the object to occur at two places of its mantle surface with separation intervals in the axial direction, and alternately controlling the two axially displaced holding devices to rise, during the pull-over application of the label jacket, in such a manner that the object is at all times subject to or guided by at least one holding device.

44. (new) Process according to Claim 33, and controlling the holding device of the object, during the axial pull-over application of the label jacket, as a function of the operating movement of the spreading jaw unit.

45. (new) Process according to Claim 33, wherein the label jacket comprises a stretchable film hose material with smaller internal diameter than the external diameter of the object, and the further steps of, before the pulling over, elastically extending the stretchable film hose material at least at its forward margin advancing in the axial direction, by the spreading jaw to a value in excess of the external diameter, and releasing the elastic extension of the stretchable film hose material after the adhesion height has been reached.

46. (new) Process according to Claim 33, wherein, after releasing the holding device, a complete shrink wrapping occurs.

47. (new) Process according to claim 33, and continuously transporting the object, at least during the pull-over application of the label jacket.

48. (new) Process according to claim 33, wherein the object is continuously transported in a circular path.

49. (new) Device according to claim 34, wherein said at least one spreading jaw unit (50) and said at least one holding device (20) are associated with a continuously drivable conveyor (3) for transporting the object (F).

50. (new) Device according to Claim 34, wherein said holding device (20) seizes, after the pull-over application of the label jacket (E), the area of the mantle surface of the object (F) that has been covered.

51. (new) Device according to Claim 34, wherein said holding device (20) is constructed in the form of a clamp having two arms (20a, 20b) which can be moved in opposite directions.

52. (new) Device according to Claim 51, wherein said arms (20a, 20b) are appropriately adapted in their shape to the external contour of the object (F), matching the area that is seized.

53. (new) Device according to Claim 51, wherein said clamp (20) is associated, as a function of the direction of movement of the spreading jaw unit (50), with the controllable actuation device (21-26).

54. (new) Device according to Claim 53, wherein said clamp (20) can be moved from a release position to a seize position, and vice versa.

55. (new) Device according to Claim 54, wherein said actuation device (21-26) is constructed to have two different seize positions, where, in a first seize position between the object (F) and the clamp (20), a slit remains for pulling the label jacket (E) through, and in the second seize position, said clamp (20) is applied, without tolerance, with a defined force of application, to the object (F) or the label jacket (E).

56. (new) Device according to Claim 51, wherein each said arm (20a, 20b) of said clamp (20) is secured to its own shaft (19a, 19b), which is vertical with respect to the plane of transport, and these said shafts (19a, 19b) are separated from each other by an interval, which allows the free penetration of said spreading jaw unit (50).

57. (new) Device according to Claim 56, wherein said spreading jaw unit (50) is secured vertically with respect to the plane of transport of the objects (F), in such manner that said spreading jaw unit can be moved alternately in opposite directions by means of a reversible double-action cylinder (34), and the operating movements are controlled, at least during some periods, by at least one radial cam (40, 41, 41b).

58. (new) Device according to Claim 56, wherein said at least one spreading jaw unit (50) and said at least one holding device (20) are associated with a continuously drivable conveyor (3) for transporting the object (F), wherein said conveyor (3) is a carousel-like revolving table, which can be rotated about a vertical axis (30'), with several placement surfaces (4), which are evenly separated, for the objects (F), and each said placement surface is associated with a liftable and lowerable said spreading jaw unit (50) and a said clamp (20), where a vertical guide (32), which takes up said spreading jaw unit (50), and said arms (20a, 20b) of said clamp (20) bearing shafts (19a, 19b) are arranged on the radially internal side of the circumferential path of said placement surfaces (4).

59. (new) Device according to Claim 58, wherein said placement surfaces (4) are associated with controlled liftable and lowerable centering elements (14).

60. (new) Device according to Claim 58, wherein said revolving table (3) is associated with a feed star wheel (5) and a delivery star wheel (6) with controllable grip elements to feed and deliver the objects (F), and said spreading jaw units (50) are raised, in the circumferential area from said delivery star wheel to said feed star wheel, from a bottom dead center position into the direction of a top dead center position.

61. (new) Device according to Claim 34, wherein said spreading jaw unit (50) can be actuated by means of control elements (70) which are secured to the circumferential path of said spreading jaw units, and further said spreading jaw unit (50) can be moved by a peripheral cam (68) that can be swiveled, as desired, from a ready position into the spread position or vice versa.

62. (new) Device according to Claim 58, further comprising a second revolving table (3'), wherein the two said revolving tables (3, 3') are connected in parallel and are supplied with a common, one-track feeding stream of objects, which is divided over said two revolving tables and which is again combined, behind said revolving tables, to a one-track row.

63. (new) Device according to Claim 49, wherein said at least one spreading jaw unit (50) and said at least one holding device (20) are moved synchronously with said object (F) by said drivable conveyor (3).

64. (new) Device according to claim 50, wherein the holding device (20) seizes said mantle surface area in the middle section of the object (F) having the largest external diameter.

65. (new) Device according to Claim 52, wherein said arms have a non-slip surface.

66. (new) Device according to Claim 54, wherein in the seize position said clamp is automatically controlled, and in the release position said clamp is controlled by said actuation device (21-26).

67. (new) Device according to Claim 59, wherein said liftable and lowerable centering elements are ring members.

68. (new) Device according to Claim 58, wherein the top side of said placement surface is shaped to the contour of the standing surface of the objects (F).